

For Research Use Only

# Phospho-CAD (Ser1859) Recombinant monoclonal antibody, PBS Only

Catalog Number: 87337-1-PBS



## Basic Information

<b>Catalog Number:</b> 87337-1-PBS	<b>GenBank Accession Number:</b> NM_004341	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ug, Concentration: 1 mg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 790	<b>CloneNo.:</b> 252640E4
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> P27708	
<b>Isotype:</b> IgG	<b>Full Name:</b> carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase	
	<b>Calculated MW:</b> 2225 aa, 243 kDa	
	<b>Observed MW:</b> 250 kDa	

## Applications

**Tested Applications:**  
WB, Indirect ELISA

**Species Specificity:**  
human

## Background Information

CAD (carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase) is a multifunctional enzyme required for the de novo synthesis of pyrimidine nucleotides. Phospho-CAD (Ser1859) is a phosphorylated form of the CAD (carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase) enzyme at Serine 1859. This site is specifically phosphorylated by mTOR complex 1 (mTORC1), acting through the downstream kinase S6K1, and plays a role in regulating pyrimidine biosynthesis. The phosphorylation of CAD at Ser1859 is a part of the PI3K-AKT-mTORC1-S6K1 pathway that integrates growth signals to regulate cell growth, proliferation, and homeostasis by modulating several anabolic and catabolic processes. In addition, insulin also stimulates the Ser1859 phosphorylation of CAD in a manner sensitive to rapamycin as well as phosphatase and tensin homolog (PTEN) deletion in the PI3K-AKT pathway. (PMID:25422319, PMID: 34638594)

## Storage

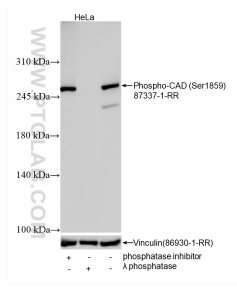
**Storage:**  
Store at -80°C.

**Storage Buffer:**  
PBS only, pH7.3

For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)      E: proteintech@ptglab.com  
W: ptglab.com

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## Selected Validation Data



Non-treated HeLa cells, phosphatase inhibitor treated HeLa cells and  $\lambda$  phosphatase treated HeLa cells were subjected to SDS PAGE followed by western blot with 87337-1-RR (Phospho-CAD (Ser1859) antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Vinculin (86930-1-RR) antibody as a loading control. This data was developed using the same antibody clone with 87337-1-

